THE VETERINARY RECORD

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Stable Management.

The last meeting of Council was a business one, and no novel controversial questions came up for consideration. The eternal subject of education was of course to the fore, but was temporarily disposed of—only to be brought forward again at every future meeting. We are all agreed that the standard of education should not be lowered, a large majority object to it being raised, but everyone acknowledges that it should be equal all over the Kingdom. With such an amount of unanimity there ought to be no difficulty in arriving at some fixed rule.

Notice of motion was given to do away with a subject of examination in Class B—"Stable management and the handling of animals." Only one argument was adduced in favour of this change, viz., that the fees of two examiners would be saved. This, of course, is of no importance if it can be shown that the examination is necessary or expedient. When the present syllabus of examinations was compiled there were some who said—"This examination is unnecessary as it is included in Hygiene and will be tested in Class C." No one disputes that stable management is a part of Hygiene. Logically and academically Hygiene includes the lesser subject, but the ways of human beings cannot be guided by logic and abstract classification. We must allow for human weakness and for practical expediency. Students, very rightly, work for "the next examination" and will touch nothing which is only tested in the next-but-one. If Hygiene is only required in the third examination no student will trouble himself about it till he is in his third year.

Only a few years back the most common complaint of veterinary practitioners was that recent graduates knew nothing of the practical handling of animals. To meet this weakness the College arranged that some test of acquaintanceship with animals should take place as early as possible in a student's career. Class A was well filled, even if it was not crowded. Class B. was the lightest and easiest of the whole course, and therefore it was chosen as the time at which to test the student's general knowledge of animals—their habits and methods of handling.

Very strong reasons should be adduced before this practical arrangement is discarded, and we believe that nothing has occurred to prove its error. Unless a man is compelled early in his studentship to show that he is acquainted with the knowledge possessed by all horsemen and stock-keepers, he is likely to obtain his diploma without that most necessary information.

HEART DISEASE IN A HORSE.

Last May I saw a valuable thoroughbred carriage horse in Mayfair. He had only been in town a few days and was thought to have "caught a chill." Pulse and respiration were accelerated, appetite wanting, and temperature 104° A dose of magnes. sulph., and one or two of sps. eth. nit., with a few days rest was followed by resumption of work. In June I was called again to my patient and found that he had worked for three weeks tolerably well, but always seemed fatigued after a journey. The stable was very badly ventilated, and all the symptoms more aggravated than before. I therefore had him moved in a float to an airy loose box on our own premises. My diagnosis was congestion of lungs, but I noticed that this attack was complicated by an irregular pulse. On auscultation, the ordinary two sounds of the heart were replaced by a confused shuffling noise. Whether this was due to structural or functional mischief I could form no opinion, but hoped it was only the latter, and that when the lung congestion cleared up the cardiac disturbance would cease.

In a day or two the respiration became more normal, but the heart sounds remained confused. In ten days respiration was quite normal, and the first sound of the heart could be distinctly heard, followed by a confused fluttering sound. The appetite remained very capricious. The horse would lie down, but always on the right side. A venous regurgitation began to show itself in the jugular veins, and wasting of the muscles of the body became apparent.

I advised the owner that the case was hopeless and suggested slaughter. The reply was to do the best I could, but to slaughter when I thought proper. The horse was permitted to live another week or perhaps two. The appetite remained capricious, the wasting increased, the venous regurgitation became more marked. Twice during this last fortnight the horse-keeper noticed a sort of fainting fit—the first one ended by the horse staggering against the side of the box, the second caused him to fall. Although to the last the horse could walk round the box, lie down and rise again easily, his periods of recumbency became shorter. The sounds of the heart remained the same—one sound, followed by what I can only describe as a confused flutter. There was no dropsy of the limbs, and there was no dropsy of the abdomen, but we frequently noticed that the horse was not "tucked-up." The abdomen seemed to retain its rotundity, although emaciation was generally marked.

During the first week in August the horse was slaughtered and a post-mortem examination made

about four hours afterwards. My notes are as follows: Quantity of blood clots in abdomen, probably due to rupture of a vessel when the horse fell on being pcleaxed. Could not find the rupture, but it seemed to have come from region of left kidney. In place of a left kidney was a round tumour as big as a large football. It weighed 32lbs. This was never suspected during life, as urination and defecation presented nothing abnormal. On the surface of the liver were four white circular patches, which extended not more than a fourth of an inch into the structure of the organ. The thorax contained no fluid. The lungs presented six or seven hard tumours varying in size from that of a hazel-nut to that of a small hen's egg. The pericardium contained about six ounces of clear fluid. The heart was flaccid and weighed eleven pounds. The cavities of the organ were filled with a recent clot which extended into the large blood vessels. From one of the auricles, which had been cut by the slaughterman in removal, protruded a firm light-coloured clot about three inches in length—not unlike a short banana in shape and colour. In consistence this clot felt not unlike a bag of chamois leather filled with cotton wool.

I am not sure that I ever before saw an ante-mortem clot in the heart of a horse, but the presence of the common post-mortem clot—translucent and jelly-like—enables me to say positively that the very different, firm object in the auricle was not of recent formation.

I am indebted to Professor M'Fadyean for examining these pathological specimens, and he reports that the renal tumour was a form of carcinoma, and that the other lesions were secondary results from it.

W. H.

THE QUESTION OF CLINICAL CONTRIBUTIONS.

While the question is before us I should like to say that the benefit of clinical articles is very much greater than perhaps some of our younger members realise, and that diseases do not fit into the squares made for them at Camden Town or Edinboro' Toon; they have a provoking way of getting mixed. If they did not, the young graduate would in every case be a better man than he with experience of practice, but out of date in class teaching.

I venture to think that more articles of interest, though not perhaps of such literary merit, would appear if our habit was to accept with gratitude the efforts of both young and old to add to the general knowledge by simple records of cases. If a man feels that he is a bit out of date and cannot command elegant language, he is discouraged from writing; he sees the shadow in advance of some junior's finger of scorn pointed at his well-meant efforts to hold out his feeble light. Youngsters, on the other hand, who can write well, are apt to record as new to the world cases which are merely fresh to them. Can we not in the coming century show a little more kindly good will, and accept of well-meant efforts as possibly of benefit to others, if not affording a particular reader any new light. If we hear a lecture, or a sermon for that matter, we may not reasonably expect that the whole of it shall exactly please us, but there will be some in the audience who will profit. Our Editor is too polite to tell us we have behaved badly to one another, but it is a fact; we are suffering the just consequences of ungenerous criticism.

Harold Leeney, M.R.C.V.S., M.S.A., Etc.

CHOREA, SEQUEL TO INFLUENZA.

Subject.—An aged brown steeplechase mare.

History.—Two days been placed on the convalescent list of influenza, the groom drew my attention to the mare's head and neck; observation of which revealed the superior cervical and orbicular muscles of the eyes and lips in a constant twitching condition.

Cause.—I put it down to a weak impaired state of the heart. Auscultation of the heart showed the beats to be very slow and weak. Pulse small, weak, and slow, in fact just perceptible; temperature normal, and a fairly good appetite.

Treatment.—Extreme quietude, a separate box being procured entirely away from all the other horses. Diet carefully regulated, xxx. grs. of digitalis was administered daily. This treatment was continued for four days, after which time the twitchings had entirely disappeared. I then put the patient on nux vomica and sulphate of iron, given as balls. Two months after she ran in a race and won.

"A SWALLOWED BONE."

Subject.—Four months old thoroughbred collie dog.

History.—The pup had swallowed a bone, which had been thrown over the garden wall.

Symptoms.—Those only shown were dulness, and marked inclination to lie down. For some time back the pup's fæces had been very liquid, solid food not being properly assimilated.

Treatment.—I administered an ounce of castor oil, blended up in milk.

The next morning on the dog being brought to me, I discovered the bone in the rectum, the posterior portion of the bone not being small enough to gain exit; after a few minutes careful manipulation with a pair of forceps, I removed the piece of bone.

Description of Bone.—Evidently a piece of tibio-tarsal bone of the fowl, the end directed anteriorly was acutely pointed, the posterior part was straight and formed two angles with the edges of the bone from the anterior pointed extremity, thus forming a somewhat irregular elongated triangle.

Dimensions of Bone.—The length was $2\frac{1}{2}$ inches, posterior extremity being $\frac{1}{2}$ inch in breadth.

Henry G. Allen, M.R.C.V.S.

Dublin.

CASE OF FRACTURED NAVICULAR BONE.

By Alexander Macfarlane, M.R.C.V.S.,
Insch, Aberdeenshire.

On November 16th I was requested by a farmer to attend a three-year-old cart gelding, lame in a hind leg, supposed to be lymphangitis. On my arrival I found the horse extremely lame as reportad, but no symptom of lymphangitis. The owner informed me this animal had been troubled with badly cracked heels for some time, but were now almost healed. I had the shoe removed, but the foot was sound. All the pain and tenderness being at the top of the hoof around the coronet, and especially at the heels around the scars of the cracked heels. Could hear no crepitation from fractured bones.

From the extreme pain and tenderness of the parts and the helpless condition of the animal I came to the conclusion I had either a case of septic arthritis or else a fracture within the horny case. The animal was at once placed into slings, a laxative administered, the hair around the foot clipped and washed with soap and warm water, the foot immersed three times daily in a bucket of warm water for half an hour each time and warm poultices kept on in the intervals. This treatment was continued for fully a week, but no improvement. While on visit a fortnight after, when made to stand on the lame foot the toe turned up, which led me to the conclusion there was either ruptured ligament or fracture, and I advised slaughter; but three days later the animal died from exhaustion.

On post-mortem the navicular bone was found fractured at its middle third and displaced.

Undoubtedly this accident must have occurred while the horse was rising or lying in his stall. Such a case is in my experience rare, without any trace of former disease, and very annoying to both attendant and owner.

IMPACTION OF THE COLON.

I hereby enclose to you an account of a case which I have just had under my care of impaction of the colon, and which if you think worthy of your notice you may insert in the columns of your paper.

Subject.—An aged light cart mare.

Previous History.—The mare had been with the present owner seven years and had never been ill.

Clinical History.—At 5.30 a.m. on Saturday, Dec. 29th, I was called up to attend this mare. The owner stated that he had brought her the previous day a distance of thirty-three miles in order to remove some furniture on the Saturday. At night he had left her quite well to all appearances.

Symptoms.—On examining the mare I found that she was in great pain, constantly lying down and getting up again. Pulse 60, full and strong, temperature 101 F., respiration accelerated; the right flank distended and doughy to the touch, the rectum on examination was empty, the animal straining a good deal on exploration. There was an entire absence of sound in the abdominal cavity on auscultation

Treatment.—I first gave an aloetic purgative together with sedative medicine, enemas, friction to the abdomen, with walking exercise. At 7.30 a.m. pain still continued so I repeated the sedative drink.

At 10.30 a.m. the mare was still in pain. I repeated the drink, gave a soapy enema, and applied a mustard poultice to the abdomen. At 3 p.m. the mare was no better and no sign of a fæcal discharge. I injected 1 grain of physostigmine and 1 grain of pilocarpine subcutaneously; after this pain got less, the mare continually getting up and down, but showing no tendency to roll. During the whole of Saturday night and the early part of Sunday morning, although enemas and hot water fomentations to the abdomen were continued, there was no passage. About eleven a.m. on Sunday morning slight rumbling was heard in the abdominal cavity. I then repeated the subcutaneous injection, in ten minutes time the mare began to salivate and show intense pain, lying down and constantly attempting to roll. In about five minutes more defæcation commenced and continued more or less for two hours. The pain disappeared, and in a short time the mare began to drink gruel and to eat bran mashes which were offered to her in small quantities. From Sunday morning she has gradually progressed, defæcates and urinates regularly, and now to all appearance seems to be very well on the road to her normal health.

W. R. Williams, M.R.C.V.S.
Bridgend, Glam. Jan. 1.

PHRENITIS OR WHAT?

I have been attending a case of a dog which was run over. On my first visit found him with blanched membranes, shallow breathing, cold extremities, pulse almost imperceptible. Gave stimulants while a gallic acid mixture was sent for.

Next day he had recovered pulse, and membranes a fair colour. On the third day he passed blood in his urine. Glycerine injections per rectum afforded satisfactory motions. Now comes the point of possible interest to readers, and my excuse for asking space.

On the fourth day he had fits of delirium in which he pursued his devoted nurses (three in number); bit inanimate objects, and fought with phantoms. The owner now asked me as to a merciful death by chloroform, but I persuaded him not to pass sentence, as I believed the fits of delirium were due to the passing into the circulation of urea (perhaps I should have said failure to pass it out by the usual channel) and that if the kidneys recovered from the injury and their function was restored, the dog would recover, and that the symptoms of rabies, so well marked even to inordinate thirst and inability to quench it, would pass away. I prescribed belladonna alternately with chloral, and later reduced the sedatives by substituting ammon. bromid. for chloral, and at last belladonna only. The larger the dose of chloral, the longer was the interval between the "D.T.'s," until the patient was completely subjugated to its influence. I discharged myself from attendance on the eighth day; the dog being apparently perfectly

well. Was this what we used to call uræmic poisoning in days of yore, or what?

Will the gentlemen who kindly offered advice as to laminitis case accept my most sincere thanks, and not think me ungrateful, if I say that "G. M." does not seem to have seen my special point (doubtless owing to my faulty description) which is that *one hind foot only* having a dropped sole, the difficulty is not wholly met in providing a shoe suitable for laminitis in front; we want a shoe which will give him ground purchase. How can we hope to start a load with a foot whose toe turns up?

HAROLD LEENEY.

LACERATION OF CERVIX UTERI, INCLUDING STERILITY IN A MARE, SUCCESSFULLY REPAIRED.

Even in these progressive days, with veterinary science occupying the position it does, a country full of breeding investments and breeding animals affording splendid opportunities, it is rather strange that contributions on the subject of animal gynæcology are so rare. Lightly referred to in the ordinary run of text-books beyond some general occasional articles, the matter is one that in this country has yet to constitute a special feature both in the teaching colleges and usual course of practice. Having, during a somewhat extended experience with breeding stock, been consulted at times in regard to the relief of sterility in valuable mares, I have met with a few difficult yet interesting cases inducive of the barren condition, whereby possibly no one has been placed in a better position to more fully appreciate such a deficiency of information and reference works than myself, though fortunately it has also fallen to my lot in a few instances to have had the assistance and advice of human specialists in this particular branch of surgery, my disadvantage has thereby been materially relieved. Nevertheless the fact remains there is yet one more open field for the profession to travel, the importance of which cannot be denied considering the great horse-breeding interests at stake, the records of which would be awaited with much interest.

In this particular instance the subject was a thoroughbred mare (a highly pedigreed daughter of Enquirer) brought to me whilst practising in the United States to ascertain the cause of her failing to breed and, if possible, by any means relieve the same. Her history was that during the previous winter she had slipped up on some snow-covered ice in her yard whilst heavily pregnant, laid there for two or three hours, and her ineffectual efforts to rise bringing on labor-pains which, after she had been got up and removed to the hospital stable, resulted in giving premature birth to a mal-presented living foal (it only survived birth a few hours) with considerable difficulty and some assistance. The mare was very sick for a time afterwards, finally getting apparently well and strong, was put to the stallion again on several occasions that season, but failed to conceive naturally or respond to artificial insemination. During the following winter she came under my notice.

In general appearance the mare looked very healthy, there were traces of slight leucorrhœa which had gummed up the tail and scalded the inside of the hocks. Examination with the speculum showed indications of considerable healed abrasions of the vaginal mucous membrane, which was heavily scarred; there was a general congestion extending from the vulva to the cervix uteri, the external os of which was enlarged and swollen, mucous membrane thickened and hanging in folds with some thick scanty discharge adherent thereto. Superiorly the cervix had been lacerated for an inch and a half in a direction upward, the fissure in which I could lay my largest finger extending from external to internal os, the parts having in consequence somewhat the appearance of an irregular incomplete circular opening with an inverted V at its upper border, and flaps of thick swollen pasty membrane hanging over either edge of the tear. The scar tissue resulting from healing of the laceration, felt tough and rigid, but there did not seem to be that acute tenderness on manipulation which is associated with like conditions in the human patient. By such an abnormal state of affairs the physiological action of the cervix uteri was rendered in abeyance, associated with vaginal, cervical, and uterine secretions, catarrhal and unhealthy—all decided causes of sterility—and to relieve which there was nothing to do but surgically repair the parts, restoring their normal arrangement and tone the best it could be done in such a patient and her surroundings.

The cervix was carefully cleansed of all adherent mucus with borated cotton, the entire mucous membrane painted with a stimulating application, and for two weeks the vaginal passage was daily drenched with tolerably warm boracic acid solution. External parts kept antiseptically clean, and the mare suitably dieted. Prior to operating her tail was washed off thoroughly with antiseptic soap, also labii, anus, and all contiguous parts. Half an hour before going to work I gave her a strong dose of chloral hydrate on an empty stomach. The breeding hobbles were put on and the tail bandaged with a long narrow strip of calico that had been well boiled in hyd. bichl. solution and dried in an oven; the instruments used had also been boiled and kept in a warm creolin solution until wanted. The retractor specula were used, a man on either side pulling the vulva as wide open as possible, one keeping the tail out of the way: with the vulsellum forceps the cervix was grasped at the inferior part of external os, drawn back as far as I could get it, and the forceps then held by an assistant reaching over my shoulder. I may say I had previously both painted and applied a strong percentage of cocaine on cotton to both cervix and laceration. At first the mare strained a little, then did not seem to mind or feel the pain of operation. Steadying wtth the long tenaculum that part of the scar I wanted to remove, with the slightly curved long, sharp scissors, commencing on the right side of the laceration I dissected upwards and gradually worked all the way round to the other side, then on by degrees forward to the internal os, until the cervix

was denuded of all abnormal tissue and exuberant membrane, and as near as I could determine the hard, tough scar fairly evenly dissected out. I firstly tried operating with the uterine knives, but found the parts too rigid and callous for these to be of service. The wound looked quite an ugly one, gaping open, the interior of a somewhat flaccid womb could could be easily seen; there was some bleeding but not so much as anticipated. The hardest job was the co-adaptation of the wound edges and applying sutures. Withdrawing the left side retractor speculum, I introduced my left arm (thoroughly antisepticised) and grasped the structures at the internal os, and brought the two freshly cut edges together with my fingers; with a small curved needle in the jaws of the long forceps—not needle-holder—I deeply adjusted a suture of rather small catgut (that had been soaked in hot water and then boracic acid solution) drew it through long, cut off the needle, and after a deal of quiet patience assisted with the long forceps in my right hand finally tied a fairly good knot; a second suture was put in about the middle of the cervical canal, and a third at the external os, taking plenty of time in the procedure. The parts were not touched with any medicant, and no further treatment was carried out beyond keeping the mare extremely quiet, a womb tonic being given twice in twenty-four hours on feed, the tail cleansed, and the sponging off of the external generative organs with creolin solution twice a day. There was leucorrhœal discharge for some weeks, but not to any particular degree. About ten days after operating I noticed a suture hanging to the discharge on the tail, but did not examine the structures operated on for a month. I then found a fairly satisfactory healing and repair had taken place, the cervix though of course enlarged was soft and pliable, its canal materially reduced in calibre, with mucous membrane looking more healthy and but slight abnormal secretion, there was fissure at the external os where from an unascertained cause the suture had sloughed out, but this did not interfere with the ultimate result. The parts were once more wiped off with a soft sponge and a stimulating application painted all over. From now on the catarrh gradually ceased, and the mare was turned away for the season without being bred. Next year she stood to second cover of the stallion, the produce being a now two-year-old. In 1899, during a mild autumn, with one or two other mares at the same stud she aborted. I have lately been informed she is heavily in foal again.

I have operated on several cases of lacerated cervix uteri, but none so severe as this. Not in any of a similar nature, or other conditions where by means of gynæcology surgery and suitable treatment, I relieved many cases of sterility in valuable brood mares—whose worth for any other purpose was absolutely *nil*—have I had more satisfactory results. The instruments I have always used are those of the set adopted by Dr. M. E. Knowles—one of the earliest if not pioneer, and finest gynæcological veterinarians in the United States—with some modifications and ideas of my own.

Among the life-time experience of many practical men no doubt numbers of peculiar cases crop up in which practical application of gynæcological surgery does or could have played an important part in alleviation. It is hoped the subject in its great relation to breeding pursuits may yet become of more special interest to the profession as a whole, and constitute another step in its onward progress.

W. F. Smith, M.R.C.V.S.

Newmarket.

Royal College of Veterinary Surgeons.

A Quarterly meeting of the Council was held at the College, Red Lion Square, W.C., on Friday, 11th inst. Mr. A. C. Cope, President, occupying the chair. The following members signed the attendance book:—Col. Duck, Col. Lambert, Messrs. Abson, Barrett, Byrne, Carter, Dollar, Edgar, Fraser, Lawson, Locke, McCall, M'Fadyean, Mason, Mulvey, Penberthy, Simpson, Trigger, Villar, Wartnaby, Winter, and Wragg. There were also present, Mr. Thatcher, Solicitor, and Mr. Hill, Secretary.

Letters regretting inability to attend were announced as having been received from Messrs. Bower, Hartley, Allen, and Professors Dewar and W. O. Williams.

The Secretary, having read the notice convening the meeting, the minutes of the previous meetings, ordinary and special, were taken as read and agreed to.

"Steel Memorial" Medals.

It had been arranged to present these medals to Professors Dewar and Mettam, but letters were received from both gentlemen regretting that they were unable to be present to personally receive the honour, and it was therefore decided to forward the medals to them.

Correspondence.

A letter was read from Mr. Goodall notifying the Council that he would not seek re-election as examiner, a course which he was reluctantly compelled to take owing to the difficulties created in his practice by the frequent absences from home which the requirements of the position entailed.

A letter was also read from Mr. Frank Pogson, M.R.C.V.S., of Trinidad, complaining of the position of vetrinary surgeons in that Island, where a veterinary surgeon was not considered a professional man. Mr. Pogson requested the Council to approach Mr. Chamberlain on the subject and if possible to remove the slight that was cast upon the profession by the Ordinance of the Government of Trinidad.

On the motion of Mr. Simpson, seconded by Mr. Mulvey, it was resolved to draw Mr. Pogson's attention to the following paragraph of the Charter of 1884—"And we do further declare and grant that the veterinary art as practised by the members of the said body, politic and corporate, shall be henceforth deemed and taken to be and recognised as a profession."

Obituary List.

The Secretary read the Obituary List, which contained the names of a very large number of deceased members.

Mr. Wragg: We all very much regret the death of our old friend Professor Williams, a gentleman so well known to the whole of the profession, if not personally, by his writings, and I beg to move that a letter of condolence be sent by the Council to his family.

Mr. Carter seconded the motion, which was supported

by Mr. TRIGGER, who said that the members would be all glad to know that steps had been taken to perpetuate the memory of Professor Williams.

It was resolved, therefore, that a letter of condolence should be sent to Professor Williams' family expressing regret at his death and the loss the profession had sustained thereby.

PRESENTATIONS TO THE LIBRARY.

Donations were announced as having been received since the last meeting, of the following works: Calendar of the Royal College of Surgeons of Eagland; *Journal of Comparative Pathology and Therapeutics*, by the Editor; *The Veterinary Journal*, and *The Veterinarian*, by the Editors; Annual Report of the Bengal Veterinary College; and the Annual Report of the Imperial Bacteriologist for the year 1899-1900. The thanks of the Council were accorded to the donors.

FINANCE COMMITTEE.

Mr. TRIGGER, as Chairman, read the Report of the Finance Committee and of the Special Finance Committee appointed to consider the financial condition of the College. The Special Committee, after further investigation of the items of income and expenditure reported that the reporters' fees for the past year amounted to £58 11s. 11d. as against £14 ten years ago. The Committee recommended that in future the verbatim reports taken shonld not be transcribed. The Committee also stated that whilst recognising that the individual law charges were not excessive, they recommended that every endeavour should be made by the Registration Committee to curtail them as far as possible. The loss on the sale of the Register was £30 per annum, but, having regard to the Charter, that was unavoidable. With regard to the examinations, the Committee reported that although it might be pssible to cut down the expenses to a slight extent, yet a considerable loss was being sustained annually, and unless the examination expenses were very much reduced the financial condition of the College would be considerably embarassed.

This report of the Special Committee was received by the Finance Committee at a meeting earlier in the day.

On the motion of Mr. TRIGGER, seconded by Mr. VILLAR, the report was adopted.

REGISTRATION COMMITTEE.

The CHAIRMAN of the Registration Committee, Mr. Simpson, read the Report, which detailed the work which the Committee had done. The report stated that the Committee had considered the application of Mr. Chiswell for the restoration of his name to the Register, it having been removed by virtue of sub-section 4 of section 5, and recommended the name to be restored on the usual terms. Another application for restoration had been referred back for evidence of good behaviour in the meantime. The Committee recommended prosecutions in certain cases. They had considered several cases of advertising, and in some undertakings had been given and in others the explanations were satisfactory.

On the motion of Mr. SIMPSON, seconded by Mr. MULVEY, the Report was adopted, and the seal of the College ordered to be attached to authority for the prosecution recommended.

EXAMINATION COMMITTEE.

Mr. MULVEY read the report, which set forth the steps taken to enquire into certain of the students' certificates and recommended that a reserve examiner should be appointed in each section of the Board of Examiners.

Mr. MULVEY moved the adoption of the report, which was seconded by Mr. WARTNABY.

Prof. EDGAR: The recommendation of the Committee is that at the next election of examiners a reserve examiner should be retained. I presume that would mean a retaining fee being paid to such a gentleman and it would add very considerably to the cost of the already overburned finances of the College. It could hardly be expected that any gentleman of position would lay himself open to be called upon at any specific time to act as examiner without having some retaining fee for his services. If it is to be made a practical suggestion the appointment would have to be an honorary one.

Mr. MULVEY: It was never intended that any fee should be alloted or paid. The appointment would be a purely honorary one and in the event of an examiner being required in any subject that gentleman would be called upon to act.

Prof. M'FADYEAN: This seems to be using the word "honorary" in quite a remarkable sense. I take it that the intention is to appoint the reserve examiners from those who are unsuccessful in obtaining an appointment as examiners. I agree with Professor Edgar that no applicant of any standing—I am almost bound to say of respectability—would accept the position of reserve examiner when the Council has refused to put him in the position of examiner. As to appointing a reserve examiner and giving him a retaining fee, I agree with Professor Edgar that that is not a judicious course in view of the present state of the finances of the College. We have managed to get on fairly well without reserve examiners up to now, and I have no doubt we can do as well in the future.

Mr. MULVEY: Prof. M'Fadyean knows as well as I do that there has been often a very great difficulty in obtaining the services of an examiner on an emergency.

Professor M'FADYEAN: I beg to move that the report be received and adopted without that particular recommendation.

Mr. TRIGGER seconded the motion. He said: It is in the hands of the President to appoint a substitute when necessary, and in my year of Presidency it happened that I was more than once called upon to do so. I did not find the difficulties that Mr. Mulvey anticipates, and I may say further that I do not think the fact of having a reserve examiner would make us any more sure of getting him than of getting any one else.

Mr. LAWSON; I take it it is not necessary to write to any of these gentlemen who have not been successful in obtaining the position of examiners. I suppose if I were present, or Mr. Mason, or Mr. Mulvey, or any of us, and there was a man short, we should be asked to take that position?

Mr. TRIGGER: No; no members of Council.

Mr. LAWSON: At the examinations there are generally present some people interested in them, and they would be asked to examine.

On the amendment being put it was carried, 11 voting for and 10 against.

LIBRARY AND MUSEUM COMMITTEE.

The report of the Library and Museum Committee, which simply dealt with some tenders with regard to book cases, was read and adopted.

REPORT OF THE COURT OF EXAMINERS.

The SECRETARY read the reports of the Courts of Examiners for the Fellowship and Membership examinations and the Walley Memorial Prize. The only candidate who entered for the Walley Memorial Prize was Mr. William Harris, of the Dick College, and he passed.

On the motion of Mr. Mulvey, seconded by Mr. Mason, the report was referred to the Examination Committee with instructions to settle the form of the prize to be given to the candidate in the Walley Memorial examination.

SPECIAL MEETING.

The Council then resolved itself into a special meeting over which the President, Mr. Cope, again presided, the members present being the same as at the ordinary meeting.

The first notice of motion on the agenda was in the name of Prof. Dewar to the following effect :

"To amend bye-law 52 by the deletion of the words on June 30th, 1896. This bye-law to come into force on the 1st October, 1901."

A letter was read from Prof. Dewar in which he said :—"I am sorry that I shall be unable to attend the meeting of Council to-morrow. Please accept and intimate my apology to the Council. Please also give notice of motion for me for the April meeting as on the opposite page and instruct the Secretary to suspend it in the Council Room in the usual manner."

The notice of motion was as follows : "To amend bye-law 52 by the deletion of the words on June 30, 1896 ; this amendment to come into force on the 1st October, 1901."

Mr. SIMPSON : I take it that by the expression of Prof. Dewar's wishes contained in that letter he desires to withdraw the notice of motion on the agenda, which the solicitor says is irregular, and he wishes this one substituted for it.

Professor M'FADYEAN : I think in that matter Prof. Dewar is in the hands of the Council, and I submit that the notice of motion which appears in his name on the agenda paper is perfectly regular. It is in the precise words which he used in giving notice of motion at the last quarterly meeting, and it has been suspended for three months. I should be very sorry to do anything discourteous to Prof. Dewar, especially as I understand that he is unable to be present to-day through indisposition, but on the other hand we have got the interests of the corporate body and the interests of the schools and students to consider, and having this in view I think it is inadvisable that this matter should be hung up for another three months. If, therefore, there is nothing forbidding the course in our bye-laws, I propose in the Professor's absence, to move this motion. I need hardly say that this is not due to any conversion on my part to Professor Dewar's views on the subject, but because I think it is a most mischievous proposal. It is, I think, the third occasion, almost in immediate succession, on which Professor Dewar has moved that we should alter our bye-laws in this direction, and I want to point out what the effect of this bye-law is. The effect of it would be that the students who entered College last October on the certificates acceptable in our existing regulations would not be allowed to go up for examination. Not only that, but supposing this motion is put off until April and comes up then, in the event of its being passed it is a ridiculously inadequate intimation to give to those who are now preparing for the examination according to the regulations printed in our own Register. I do not propose to say anything at the present moment further with regard to the inadvisability of altering our bye-laws in the way suggested, because I reserve to myself the right to reply. I therefore beg to move "That bye-law 52 be amended by the deletion of the words on June 30th, 1896."

Mr. SIMPSON : I have no feeling whatever in this matter, but I was given to understand by the solicitor that the notice of motion which was given by Professor Dewar was not in order. I should ask your ruling, sir, then, as to whether the notice of motion is in order or not.

Mr. THATCHER (solicitor): What happened at the meeting was this. Prof. Dewar had given notice of a similar motion and it was defeated. At the end of the meeting he said that he would give notice for the next meeting of the same motion, which was simply that the bye-law should be amended by the deletion of the words "on June 30th, 1896." There was no concealment on the part of Professor Dewar, and afterwards he reconsidered the matter and thought there should be a time limit, and when he put the notice on the board he put the time limit on also. But that was not the notice as given to the meeting. Professor Dewar spoke to me on the same subject and asked me whether I considered the notice regular or irregular so far as the addition was concerned, and I told him it was irregular.

Professor M'FADYEAN : I entirely agree with what the solicitor has said. I had failed to observe a date was inserted at which the motion, if carried, would come into effect, and I agree it is not in order.

Professor M'Fadyean's motion then dropped, and Prof. Dewar's notice of motion was suspended as requested by him in his letter.

MOTION BY PROF. J. McI. McCALL.

The second and last notice of motion on the agenda paper was the following by Prof. J. McI. McCall :

"That bye-law 52 be altered by the addition of the following words :—'Excepting only that any student who shall present a certificate granted by the Educational Institute of Scotland showing that he has passed an examination equivalent in all respects to their examination prevailing on the 30th June, 1896, and then known as the preliminary medical examination, shall be entitled to registration as a veterinary student.'"

Mr. SIMPSON raised the question whether the notice of motion was in order, and Mr. Thatcher said : I am afraid that if the minutes are referred to it will be found that Professor McCall did not give the notice in accordance with the way it appears on the paper. I may mention that the Secretary was in some perplexity about this notice, and I told him his best course was to put it on the agenda and take the opinion of the meeting, and not to take upon himself the responsibility of whether the notice was regular or irregular. Of course Prof. McCall may have some explanation to make on the subject. If you will look at the minutes of the last meeting of the Council I do not think you will find this motion appears there.

Mr. MULVEY : I agree with that, but at the same time the notice as suspended is not in order because there is a date which would not allow for it to mature.

Mr. VILLAR : As far as I recollect, Prof. McCall did give notice of motion of some sort, and if it is not this what notice of motion was it ? I venture to suggest that we should have the original minutes of the last meeting for the purpose of seeing what happened.

The PRESIDENT : They are printed here.

Mr. VILLAR : This is simply a brief resumé of the minutes. May I ask for the transcript of the shorthand notes ?

Mr. MASON : What appears on this document has been carried as our minutes.

Mr. MULVEY : Do you challenge the minutes ?

Mr. VILLAR : No, I do not. It says here that "Prof. McCall gave notice that he would bring forward a similar resolution to the one he had moved on the present occasion, at the next meeting." That means this present meeting.

Mr. THATCHER : The motion by Prof. McCall at the last meeting was "That the Council of the Royal College of Veterinary Surgeons make arrangements to conduct a special preliminary examination for veterinary students." That was lost. Professor McCall then gave notice that he would bring forward a similar resolution to the one he had moved on the present occasion at the next meeting. The motion now brought forward is obviously not the same motion that was brought forward at the last meeting.

Prof. McCall: It is a similar one.
Mr. Thatcher: I do not think it covers it.
The President: And I rule it out of order.
Prof. McCall: Then I beg to give notice that at the next meeting of Council I will bring forward that motion identically word for word as it is at present on the agenda.

Notice of Motion by Prof. Edgar.

Prof. Edgar gave notice of his intention to move at the next meeting: "To amend bye-law 52 by the deletion of the words '1st January, 1896.' This bye-law to come into force on the 1st October, 1902."

Notice of Motion by Mr. Trigger.

Mr. Trigger: I believe there is a general feeling throughout the Council that the questions of stable management and veterinary hygiene in the examinations are over-lapping, and that it would be a very simple matter indeed to transfer stable management to veterinary hygiene, of which it is certainly part and parcel. By this means we should save two examiners (Mr. Wragg: Hear, hear.) I believe it would be not only to the interest of this Council, but very largely to the interest of the students as well. I therefore beg to give notice:—"To alter bye-law 72 by transferring paragraph 3 of Class B examination to paragraph 3 of Class C examination; to extend the time 'oral,' paragraph 3, Class C."

On the motion of Mr. Wragg, seconded by Mr. Mulvey, a hearty vote of thanks was accorded to the President, and the Council adjourned.

VETERINARY SOCIETIES

THE VETERINARY MEDICAL ASSOCIATION OF IRELAND.

(Continued from p. 381).

FRACTURE OF THE INFERIOR MAXILLA IN THE HORSE BY A SEVERE BIT.

By F. C. Mason, M.R.C.V.S., Royal Veterinary College of Ireland.

The only excuse offered for bringing forward what may appear to many present a trivial and common case, is the fact that in this and in two other cases with points of similarity, the writer happened to act in conjunction with the respected Hon. Secretary of this Association, and he feels that it may be of interest to many present to hear how completely and quickly recovery may be expected under favourable conditions in cases where portions of a fractured bone have to be removed.

The *subject* was an American trotter to which the writer was called on account of loss of appetite, the request being worded "to come and rasp his teeth." On approaching the mouth of the animal (which was in wretched condition) the latter showed great reluctance to allow his mouth to be touched. Having with a little difficulty obtained possession of the tongue, the latter organ was found to be lacerated in longitudinal lines. Further examination showed the presence of a spicule of bone projecting through the mucous membrane of the right ramus of the inferior maxilla.

Gentle attempts at removal proving abortive, the veterinary attendant found it necessary to enlarge the orifice through which part of the bone protruded, after which the bone now before the meeting was extracted with a pair of tooth forceps.

It is supposed that the injury to the jaw was caused by the use of a very severe bit on a bad "puller," and that the laceration of the tongue was caused by the spicule of bone protruding through the mucous membrane.

After-treatment consisted of a free use of boracic acid at the time immediately subsequent to the operation, a liquid diet only being used for two days. Within five days the wound had so far healed that the owner was able to drive the patient six miles to Mr. McKenny's yard, for the purpose of examination, and the wound has never since given any trouble.

In connection with this subject, it may be mentioned that the writer, with Mr McKenny, treated a celebrated trotting pony—"Mouse"—suffering from a fracture of the os pedis, and that after one piece of bone had been removed by Mr. McKenny, and another by the writer at an interval of some days, there was complete recovery, and the animal is at present working sound.

Here also the chief dressing used was boric acid.

FRACTURE OF THE OS PEDIS.

By A. J. Beckett, M.R.C.V.S., Royal Veterinary College of Ireland.

The lesion I am bringing before your notice is interesting in some respects. Complicated as it was by sandcrack, and by entire absence of crepitation, it was not diagnosed during life. The post-mortem examination proved in this case, as it does occasionally, a rather unpleasant surprise, and shows the real value of post-mortem examinations as a test of the correctness or otherwise of clinical diagnosis.

The animal, an aged dray mare, had been affected with a chronic sandcrack in the near hind foot for some considerable time. This, although well-marked, had not affected the coronary or laminal structures and did not cause lameness. This animal had a nasty habit of kicking out viciously after being turned or backed, and frequently struck the wheel tyre, the concussion producing temporary lameness. One day she was driven into my yard dead lame, in fact holding the foot up when stationary. The history obtained was that when turning she had lashed out and hit the tyres as usual, after which she showed the symptoms observed. On examination I found the sandcrack much enlarged and bleeding, and extending upwards to the skin over the coronary band. Although this injury appeared quite sufficient to cause the lameness and pain exhibited, I examined for fracture as thoroughly as was possible under the circumstances, but could not detect crepitation. I therefore concluded that the lesion was mainly superficial and that the pain evinced was due to the sandcrack and inflammation of the laminal structures following the injury. The animal was taken home, a poultice applied, and she was allowed to lie down. On visiting next day I found lameness more marked, the patient sweating; there was fever, a hard wiry pulse and evidence of great pain. I had the shoe removed and the hoof grooved to release pressure. Sedative treatment was adopted locally and generally. The case however proved most refractory; pain was constant, marasmus marked, in spite of the fact that the mare was feeding regularly and lying most of the time. In a few days bedsores on knees, hocks, haunches, etc., became very conspicuous, due to the constant struggles of the animal in moving. Slings were out of the question owing to the construction of the stable, and I doubt if they would have been of any benefit in this case, as the animal lay constantly. After a week, in spite of the best antiseptic treatment possible under the circumstances, pus appeared above the site of the sandcrack and gradually spread round the coronary band. I advised slaughter, but the owner would not consent, and kept the animal until she died a day or so later from exhaustion.

The post-mortem examination showed a fracture of the

os pedis, the piece being detached and free in the horny covering. This lesion, I believe, accounted for the unsatisfactory course the case had taken.

In Möller's surgery it is stated that fractures of the pedis are rare and said to be caused by slips, picked-up nails, the heel of shoe being caught in rails, by falls, and by striking walls when jumping. I have not seen mentioned a case in which the lesion was complicated with sandcrack, and hope it may prove of interest to the members.

Möller believes that recovery from fractured os pedis chiefly depends on whether the other foot endures the extra strain without becoming affected with laminitis, and that the prognosis is therefore ruled by the degree of pain. He prefers to allow the animal to lie if it will do so, rather than use slings for support.

FRACTURE OF THE EXTERNAL ANGLE OF ILIUM WITH AN UNFORSEEN SEQUEL.

By H. G. Allen, M.R.C.V.S., Dublin.

Subject.—A black mare, ten years old.

History.—Had slipped up in her stall, and when brought out for work was found to be going "stiff" behind.

Symptoms.—Mare very lame on the off hind limb, walking lame; when trotted went all to the near side, not moving in a straight line; marked abduction of the affected leg, with evident difficulty in advancing the limb.

On manipulation of the off hind quarter, the muscles gave signs of having been strained.

Careful examination of the angle of haunch revealed neither crepitation, pain, swelling, or abrasion present.

Diagnosis.—Hip lameness, the superficial muscles being evidently stretched and strained, in consequence of slipping in the stall.

Treatment.—Rest, hind shoes removed, roomy box. Hot fomentations, and infriction of a stimulating liniment (ol. terebinth, liq. amm. fort., and ol. lini.) daily to gluteal region; this treatment was continued for a fortnight without any beneficial result. The man in attendance reported on the seventeenth day that there was a swelling on the quarter of the off-side. When I examined the swelling in question I found it to be extremely tense on palpation, leading me to suspect a "hernia."

Observing the external angle of the ilium, I noticed to my surprise that the under portion of the posterior part was deficient. I then came to the decision that what I had to deal with was a gravitation abscess, reasoning it out that the portion of bone detached was pulled down by the internal abdominal oblique muscle towards the direction of the umbilical region, and was undergoing "necrosis." I accordingly lanced the abscess at a dependent part to allow of drainage, and gave exit to over a quart of offensive purulent material, some of which was of a curdy character, the remainder liquid. The abscess cavity was irrigated twice daily with Jeyes' solution—(1-40), and plugged afterwards.

Pieces of degenerated muscular tissue came away daily, of a yellowish grey colour, on flushing out of the cavity. This treatment was continued for over a week without there being any diminished amount in the discharge.

I was called to see the horse at the beginning of the fourth week, as she was constantly lying down, and when in the recumbent position showed great difficulty in gaining her legs again, having to receive help. I knew then that her back must be injured, suspecting ankylosis. On inquiry I found out that she always showed symptoms of inability to rise when once down prior to her entrance on the sick list, so that there was no connection between it and the affection she was already suffering from; after this I adopted slings. When I had my patient lying down I secured her, and explored the position where I had lanced. After enlarging the incision I found that my previous surmise was correct, there being a piece of bone—made evident by digital percussion—directly in contact with the abdominal cavity, in the region of the flank, a few inches above the loose piece of skin ("Flesk") in front of the stifle. I therefore decided to operate, owing to the liability of the necrosed piece of bone eventually finding entrance to the abdomen, peritonitis resulting.

Having obtained permission to operate, pointing out at the same time that there was a risk on my part in penetrating the abdominal cavity, the horse being duly prepared for chloroform, was cast, and the chloroform administered (℥ii). Area of operation was clipped as close as possible, washed with soap and water, and afterwards rendered aseptic by Jeyes' solution (1—40). I then further increased the incision already made, reaching in length seven inches. On examining the piece of embedded bone I found that it was out of the question to remove it *en masse*, as the abdomen would for certain be penetrated. Trephining the central part of the bone, I thought I could by that means loosen it, but was not successful, and had to finally suture up the wound and let the mare up. The muscles surrounding the piece of bone were of a green hue. On the fifth day after my previous operation I threw the mare down again, and chloroformed as before (℥ii); this time I was well armed, having procured a small surgical saw, and some strong scalpels and forceps I now set to work—after removing the former sutures and rendering the wound thoroughly aseptic—to dislodge the embedded bone piece-meal, sawing small pieces until they were considerably loosened, and then removing them with scalpel and forceps. This lasted for three and a half hours, in which time I had removed between fibrous tissue and bone an ounce and half per weight. After thorough irrigation of the wound I put in six cane tape sutures. I may mention that there were four oblique-mouthed channels in a vertical direction in the vicinity of the necrosed bone, having to be thoroughly syringed out to remove the pent-up pus in them on dressing the wound; afterwards they ultimately closed up. The dressings used from this date—second operation—were first Jeyes' solution (1—40), and then carbolic acid solution (1—40), the wound being dressed twice daily. When the wound was well on its way to healing tr. iodine solution (1—10)—with pot. iodid. added to keep it in solution—was used in lieu of the carbolic dressing. The sutures were removed in about a week's time—the "gaping wound" thus caused was kept plugged with Hartiman's corrosive sublimate wool, and antiseptically treated, as previously. There was a great hollow in the flank and quarter of the off side after the wound was healed, the mare, however, going sound. Mare was discharged as cured at the end of July, being admitted to sick list the 2nd April. I ultimately had the mare destroyed on the 9th of October, owing to the ankylosed vertebræ.

Autopsy revealed the under portion of the posterior part of the external angle of ilium deficient. Ankylosis (ossific) of bodies and transverse processes of the lumbar vertebræ. The seat of operation perfectly healthy, the skin being only thickened where the operative incision had been made.

FRACTURED OS PEDIS.

Subject, brown-gelding hunter, six years old.

History.—After jumping out into a road dropped dead lame, so much so that the owner thought the horse "had put out his shoulder," and had eventually to be brought home in a cattle float.

Symptoms were those typical of shoulder lameness, viz., disinclination to bring the fore-leg forward, dragging of the toe. There was, however, a marked

inability to bear weight on the affected limb; no pain was evinced on percussion of the wall or sole of the foot, or on manipulation of the muscles in the vicinity of the shoulder.

Treatment.—Cold-water swabs continually kept to the foot. Coronet was blistered in four weeks time. The horse gradually got better, and did farm work after six months. Horse was eventually destroyed, owing to having received a compound comminuted fracture of the tibia, as the result of a kick.

Autopsy showed the fracture in a united condition. The following points are descriptive of the fracture. Callus on the upper portion of the internal lateral part of the laminal surface, and in immediate contact with pyramidal process. Comminuted fracture (three pieces) of the left lateral portion of the articular surface for the os corona. Displacement of the left articular surface for the navicular bone in a backward direction. Fracture extending across tendinous surface (anterior part) of bone, inclined more to the left than right, through semilunar crest into solar surface towards the left central division. Notch at toe of bone due to absorption, in conquence of tight toe-clipping.

Sidebones.—The presence of these, I think, had a great deal to do with the uniting of the fracture.

At the present time I have a chestnut charger gelding, aged, almost sound, having been the subject of a "fractured os pedis," which was caused by being turned on a very irregular and stony field during the period of convalescence from pneumonia, and was brought in one night terribly lame.

In this case there was dragging of the toe, disinclination to bring the leg forward, inability to bear weight, but pain on percussion of the sole or wall by the hammer, the patient uttering a groan of agony.

I had this horse under treatment for two months, and he is turned out at present; the last thing I heard about him was, that he was going splendidly.

In these cases I adopted peat moss as a bedding, for the reason that it is constant, and not liable to get so displaced as straw, leaving the floor bare.

The following took part in the discussion: Messrs. M. Hedley, F. C. Mason, A. J. Beckett, J. H. Norris, E. C. Winter, Prof. A. E. Mettam, and J. McKenny.

JAS. MCKENNY, M.R.C.V.S., *Hon. Sec.*

LANCASHIRE VETERINARY MEDICAL ASSOCIATION.

The quarterly meeting was held at the Grand Hotel, Manchester, on December 6th, the President, Mr. Joseph Abson, in the chair, and those present included:—Messrs. H. D. Chorlton, E. Faulkner, A. K. Hart, A. Holburn, T. Hopkin, J. W. Ingram, W. Kendall, S. Locke, H. Locke (Hon. Sec.), J. S. Lloyd, E. H. Stent, W. A. Taylor, and J. B. Wolstenholme, Manchester; A. Munro, Altrincham; W. Stothert, Blackburn; J. H. Carter, Burnley; R. C. Edwards, Chester; R. O. Stafford, Crewe; J. McKinna, Huddersfield; Geo. Morgan, and T. H. Davies, Livepool; R. Hughes, Oswestry; Wm. Hall, Royton; and Wm. Woods, Wigan. Visitors: Messrs. John Howard, Ardwick; M. T. Giblin, Blackpool; A. W. Mason, Leeds; R. H. Knight, Sowerby Bridge; and Geo. Platt, Manchester.

Apologies for absence were announced from Professors McCall, and Penberthy, and Messrs. H. H. Ferguson, Hugh Ferguson, Alex. Lawson, and J. Mitchell.

The PRESIDENT in opening the proceedings alluded to the serious loss they and the profession had sustained by the death of Principal Williams. Being a very old member of the Association he was well known to the members—in fact it would not be incorrect to state that almost all of them were old students of the Professor. To show their deep respect for his name, Messrs. Faulkner, S. Locke, Wolstenholme, Woods, Morgan, and he were present at the interment. The profession had uedoubtedly lost one of its giants, for Professor Williams had perhaps done for the profession as much as any man living. His loss was deeply deplored by the Society, and the least they could do was to pass a vote of condolence with the bereaved family on the irreparable loss which they and the Association had suffered. He therefore proposed that the Secretary should write a letter of condolence to Professor W. O. Williams expressive of those sentiments.

Mr. CARTER seconded the proposition, adding that it grieved him to do so because Professor Williams was a very old friend of his. He knew him some years ago when he was in practice at Bradford.

Mr. FAULKNER, in supporting, said he was entirely in accord with the sympathy expressed by the President, and Mr. Carter. Prof. Williams had, without doubt, endeared himself to all his students, and was unquestionably a giant in the profession.

Upon the motion of Mr. McKinna, seconded by Mr. Taylor, the minutes of last meeting were taken as read.

The resignation of Mr. James Hart, of Stockport, was accepted with much regret.

The question of arrears in members' subscriptions was again considered. It was proposed by Mr. Faulkner, seconded by Mr. Hughes and unanimously carried, that those members who were in arrear to the amount of 40 shillings should be notified that if same were not paid by the end of the year their names would be expunged from the Society's register.

The SECRETARY having read the circular letter (see p. 328) from Mr. Richard Scott, relative to a movement on the part of the students of the New Veterinary College, Edinburgh, to perpetuate the memory of the late Principal, it was unanimously resolved, after some discussion, and upon the proposition of Mr. Faulkner, seconded by Mr S. Locke, to answer the communication, intimating that the Association would be willing to join the students and the profession in any movement which commended itself to the profession as adequately carrying out the object in view.

Mr. TAYLOR moved that the expenses incurred by the President in attending the Aberdeen Congress be borne by the Society. Mr. McKinna having seconded, the motion was carried.

ELECTION OF OFFICERS FOR 1901.

Mr. TAYLOR proposed the re election of the President for another year, adding that their best thanks were due to him for the very able and efficient manner in which he had fulfilled the presidential duties during the past twelve months. Those who had occupied the position well knew the difficulty—not in performing the ordinary routine duties, but in getting members and others to give essays, read papers, or introduce subjects for discussion. That help was not always obtainable, but he hoped that all would, in the coming year, extend to the President the support he needed.

Mr. FAULKNER heartily seconded the proposition, remarking that Mr. Abson had in the past year fulfilled all the obligations he undertook. The members highly appreciated his efforts and wished him good health and a successful year of office.

The PRESIDENT warmly thanked them for a renewal of their confidence. He, however, hoped that in his second year he would not experience the difficulty he had in the past twelve months of obtaining papers. Papers had been promised him, but at the last moment they were not forthcoming. It was most disappointing, but he relied on their forbearance and kind assistance.

Mr. McKinna, it was understood, remained a Vice-President.

Mr. WOLSTENHOLME proposed Mr R. Hughes as Vice-President, and Mr. Taylor proposed Mr. A. Munro as Vice-President

Both resolutions were seconded and carried unanimously.

Mr. H. Locke was re-elected Hon. Sec., upon the motion of the President, seconded by Mr. Wolstenholme.

Mr. Wolstenholme was reappointed Treasurer, the resolution being proposed by Mr. Carter and seconded by Mr. McKinna.

Messrs. Faulkner and Jones were re-elected Auditors upon the motion of Mr. Woods, seconded by Mr. Hughes.

It was proposed by Mr. Taylor, and seconded by Mr. Stothert, that the usual Committee consisting of the officers of the Association with power to add to their number, be appointed to arrange for the annual dinner.

SPECIMENS.

Mr. STOTHERT exhibited a calculus from a mare's rectum, and two cystic calculi from a six-year-old St. Bernard bitch.

The PRESIDENT submitted a scirrhous cord taken from a draught gelding aged nine to ten years, and a tumour which had been growing from the sub-maxillary gland in a four-year-old hackney mare. In connection with tumours, he thought, it might nearly always be concluded that in benign growths there was pus in the centre. He also showed an electric lamp, which he had found most useful when examining the molar teeth of horses.

MEAT INSPECTION.

By ALFRED HOLBURN, M.R.C.V.S., Chief Veterinary Inspector, Corporation of Manchester.

The statutory provisions which regulate matters relating to unsound meat in England and Wales, outside the Administrative County of London, are contained in the Public Health Act, 1875, Sections 116 to 119, and the Public Health Amendment Act, 1890, Section 28.

Public Health Act, 1875.

Section 116.—Any Medical Officer of Health or Inspector of Nuisances may at all reasonable times inspect and examine any animals, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk exposed for sale, or of preparation for sale, and intended for the food of man, the proof that the same was not exposed or deposited for any such purpose, or was not intended for the food of man, resting with the party charged ; and if any such animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk appears to such Medical Officer or Inspector to be diseased or unsound, or unwholesome, or unfit for the food of man, he may seize and carry away the same himself or by an assistant, in order to have the same dealt with by a Justice.

Section 117.—If it appears to the Justice that any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk so seized is diseased, or unsound, or unwholesome, or unfit for the food of man, he shall condemn the same, and order it to be destroyed or so disposed of as to prevent it from being exposed for the sale or used for the food of man ; and the person to whom the same belongs or did belong at the time of exposure for sale, or in whose possession or on whose premises the same was found, shall be liable to a penalty not exceeding twenty pounds for every animal, carcase, or fish, or piece of meat, flesh or fish, or any poultry or game, or for the parcel of fruit, vegetables, corn, bread, or flour, or for the milk so condemned, or, at the discretion of the Justice, without the infliction of a fine to imprisonment for a term of not more than three months.

The Justice, who, under this section, is empowered to convict the offender may be either the Justice who may have ordered the article to be disposed of or destroyed, or any other Justice having jurisdiction in the place.

Section 118.—Any person who in any manner prevents any Medical Officer of Health or Inspector of Nuisances from entering any premises and inspecting any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk exposed or deposited for the purpose of sale, or of preparation for sale and intended for the food of man, or who obstructs or impedes any such Medical Officer or Inspector or his assistant, when carrying into execution the provisions of this Act, shall be liable to a penalty not exceeding five pound.

Section 119.—On complaint made on oath by a Medical Officer of Health, or by an Inspector of Nuisances, or other officer of a Local Authority, any Justice may grant a warrant to any such officer to enter any building or part of a building in which such officer has reason for believing that there is kept or concealed any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk which is intended for sale for the food of man, and is diseased, unsound, or unwholesome, or unfit for the food of man ; and to search for, seize, and carry away any such animal or other article, in order to have the same dealt with by a Justice under the provisions of this Act.

Any person who obstructs any such officer in the performance of his duty under such warrant shall, in addition to any other punishment to which he may be subject, be liable to a penalty not exceeding twenty pounds.

Public Health Acts Amendment Act, 1890.

Section 28.—(1) Sections 116 to 119 of the Public Health Act 1875 (relating to unsound meat) shall extend and apply to all articles intended for the food of man, sold or exposed for sale, or deposited in any place for the purpose of sale, or of preparation for sale within the district of any Local Authority.

(2) A Justice may condemn any such article, and order it to be destroyed or disposed of, as mentioned in Section 117 of the Public Health Act, 1875, if satisfied on complaint being made to him that such article is diseased, unsound, unwholesome, or unfit for the food of man, although the same has not been seized as mentioned in Section 116 of the said Act.

Similar powers of seizing and condemning horse flesh intended for human food, unless sold as horse flesh, are provided for in the sale of Horse Flesh Act 1889. The powers given here are more for the prevention of fraud than for the protection of health, as no mention is made as to diseased meat. This, however, is covered by the Public Health Acts.

An analysis of these sections will show that :—

(1) Outside the Medical Officer of Health the Meat Inspector must first of all be appointed an Inspector of Nuisances under and for the purposes of the Public Health Acts by the Local Authority.

(2) The significance of the terms diseased, unsound, unwholesome, or unfit for the food of man, requires to the understood and determined by the Meat Inspector.

(3) It is necessary in seizing meat to define whether it is sold, exposed for sale, deposited for sale, or in preparation for sale, and intended for the food of man, and prosecutions have been lost on account of charging a man with one thing when he did another.

(4) Meat seized is not legally condemned until it is condemned and an order signed for its destruction by a Magistrate. (An exception to this rule is made when the owner of the article seized or condemned gives a certificate or note to the Inspector, that he unconditionally gives it up to him on account of being unfit for human food).

The Justice condemns the meat simply upon his own view and smell thereof. The condemnation is not conclusive evidence that the food was bad, and the party summoned is at liberty to show that the Justice was wrong in condemning it.

The part played by the Meat Inspector therefore is necessarily one of no small importance. The appeals made to him are :—

(1) The public require protection from food poisoning, whether bacterial infection, septic intoxication (ptomaine poisoning), or unwholesomeness of diet.

(2) The Justice is dependent upon sound advice before signing the Order for destruction.

(3) The party charged desires fair play, that is to say the condemnation of all diseased and unwholesome food, but not the confiscation of sound meat as a matter of course or by way of experiment.

With respect to these principles, we are bound to study meat inspection from a scientific aspect, which is the only way that any guarantee of safety can be attached to the undertaking. From what has been already said it may be gathered that meat inspection forms a part of preventive medicine of which the basis is a knowledge of the natural history of disease. For the investigations as to the causes of disease we are chiefly indebted to our pathologists. They have shown us that certain organisms cause certain diseases, and that animals may serve as the hosts of these organisms ; hence, in seeking for the source of disease in the human subject the inquirer is led to study disease in the lower animals. Everyone knows that meat is diseased in consequence of disease in the animal from which it was taken, so that evidences of disease as manifested in the living and dead animal should be understood by the inspector.

Meat inspection therefore is neither more nor less than applied pathology. It is not learnt by examining sound animals, but taught in the post-mortem room and the laboratory. It is in the examination of diseased animals and carcases where the skill of a man is required, to determine whether he is dealing with a disease peculiar to animals or communicable to man, and whether or not it will necessitate the condemnation of the whole or part of the carcase. Sometimes it becomes more a question of what can be passed rather than what can be condemned.

I need not argue further the pathological side of my subject, because I feel sure it will be generally admitted that in pathological research lies the foundation of meat inspection Although it sometimes may be said that the lessons taught by investigators cannot be applied absolutely in daily practice, nevertheless they provide a basis for further inquiry by those employed in public service. I not infrequently come across mysterious lesions of disease, which are invariably made clear by an interview with Professor Delépine, to whom I desire to express my debt of gratitude.

(To be continued.)

SOUTH AFRICAN HORSE-SICKNESS : ITS PATHOLOGY AND METHODS OF PROTECTIVE INOCULATION.

By Alexander Edington, M.B., C.M., F.R.S.E.,
Director of the Colonial Bacteriological Institute.

This disease, so far as is known, is peculiar to Africa. It has been known since the year 1780 as affecting Southern Africa, but probably exists also in more northern parts of this continent.

In my Annual Report to the Colonial Government for 1894, as Director of the Bacteriological Institute, I have dealt at considerable length with the history of this remarkable disease, and it is, therefore, not requisite to enter with much detail into that side of the enquiry at this moment.

While affecting the Transvaal and Rhodesia every year—beginning about the end of October and continuing until the following May, or even later—it only affects the Cape Colony in an epizootic form in certain years, although sporadic cases occur annually in certain localities.

It affects horses, asses, mules, and it has been asserted —although I have never seen such cases—that quaggas have also been killed by it.

I have recently identified a disease which occurs to a limited extent among cattle as being probably of the same nature, while a disease which occurs widely throughout the Eastern Province among high bred goats and sheep is closely related in its pathology with this malady.

Horse-sickness occurs mostly in low-lying parts of the country, independent of the fact that the general locality may be considerably elevated above the sea-level ; thus Johannesburg, which is about 6000 feet above the sea-level, is frequently subject to its baneful influence.

Certain atmospheric conditions seem to favour the production of this disease, for it is commonly observed to occur during periods when the air has become humid and has been associated with a high daily temperature.

Deep kloofs or gullies where vegetation is abundant and the ground, below the undergrowth, moist, are especially dangerous to susceptible animals.

During a season of sickness it has been commonly observed that animals which are not allowed to graze after sundown nor before the sun has dried up the dew from the herbage, do not so readily become affected, but that where this routine is not carried out mortality commonly occurs.

Horses which are kept in the stable during the night are, as a rule, safe, but during last year 60 per cent. of the stabled horses in Eshowe, Zululand, died of this sickness. Veterinary-Lieutenant Coley, A.V.D., who kindly made the observations for me, stated that these horses were mainly fed on Guinea or Ubaaba grass mixed with forage or Indian corn. This grass was usually cut in the evenings and made into bundles till next day. Those who took particular care to have the grass thoroughly dried in the sun before using it did not lose their horses, while those who neglected this precaution lost heavily.

It is only directly contagious ; for, while horses may be inoculated with virulent blood and be permitted to die among clean animals, I have never found, during observations extending over seven years, a single case of infection from such a source.

The Boers have been in the habit of sending their horses to elevated tablelands previous to the onset of the season of sickness ; such areas being usually free from the disease. The onset of frost commonly puts an end

to the ravages of the disease, and the first frost in a season has been usually regarded by the Boers as a sign that their horses might be recalled from their sanatoria.

The season of sickness usually begins about the beginning of November and lasts till the following May; the worst period being from the end of December until the end of February.

The mortality from this malady is terribly great in countries such as Rhodesia and the low-lying parts of the Transvaal, in which it makes its appearance annually. In Rhodesia the annual losses amount to 90 per cent.

Animals which have been affected and subsequently recover are spoken of as "salted." They are believed to be protected against the disease for the future, and, owing to this belief, the value of a "salted" animal is from six to ten times what it would be in an "unsalted" condition.

As, however, the sickness does not always present symptoms during life which admit of a satisfactory diagnosis being made, it happens that most animals which become ill during the season, from whatever cause, are believed by the farmers to have the horse-sickness, and should they recover are immediately said to be "salted." It will therefore be evident that many animals sold as "salted" are not really so, and thus the report finds favour that even "salted" horses die of the sickness.

I have, however, had ample opportunities of ascertaining that some "salted" horses have actually died, notably animals which, after "salting" in one area, have been removed to a much more unhealthy one. My experiments, among other things, go to explain these occurrences.

Secondary Fever.—Animals which are really "salted" are subject at much later and irregular periods to attacks of fever. Such attacks have no relation to fresh infection as I have found them to occur in all "salted" horses which I have kept under close observation in the stable. The attacks vary greatly both in degree and duration; they may last for one day, or may extend over as many as six days.

Symptoms of Horse-Sickness.—In the variety of the disease styled by the Dutch Dun-paardziekte, the symptoms are, for the most part, conspicuously absent until just before the onset of death. The animal may be seemingly in perfect health and vigour, yet within an hour it may suddenly begin to show that its breathing is actively interfered with; it will heave violently at the flanks, stagger about for a few moments, and falling down, eject a huge cloud of white foam from the mouth and nostrils, after which death is almost immediate. In the other variety, known as Dikkop-ziekte, the neck, head and lips swell up enormously; the latter commonly to such an extent as to fall back and expose the teeth of the lower jaw. A sub-variety of this kind is called Blputong, owing to the swelling being mostly confined to the tongue, which then presents a bluish colour owing to the venous engorgement of the organ.

Owing to the apparent absence of symptoms until just before the onset of death, it was commonly believed that the whole course of the disease, from the moment of infection until death, occupied only a short period. As, however, it has been found possible to carry infection from one animal to another by inoculation, the onset of fever has been found to follow the operation, only after a prolonged period of incubation.

Post-Mortem Phenomena.—Whichever variety of the sickness the animal may have suffered from it is usual, although not an invariable rule, to find a huge cloud of white foam around the mouth and nostrils of the dead animal. This usually remains unchanged, to any great degree, for a long time even during exposure to a hot sun.

If this exudation begins during life, one notices that it arises from a fluid which the animal is coughing up, and, if one stands close to an affected horse during this stage, the breath sounds are clearly audible as if passing through some fluid material which is present in the air passages. As the animal stands with head hanging down, this fluid falls from the mouth and nose spasmodically, especially during coughing. I have caught quantities of this material in glass vessels when it appears as a straw coloured fluid, but is spontaneously coagulable in the presence of minute traces of blood.

It is coagulated by heat, and has been found to consist almost entirely of the blood plasma.

On removing the skin of a horse affected with the ordinary form of the disease, one finds among the fasciæ in various situations, but particularly along the course of the jugular vein, lines of yellow almost transparent exudation, portions of which when removed present an appearance like gelatine.

The pericardium invariably contains an excess of fluid. As a general rule, the amount present is such as to render the membrane so tense that when it is pricked with a knife the fluid contained within it is ejected with some little force. I have removed as much as 140 fluid ounces from one case, but, as a rule, the amount is under 100 ounces.

In colour it is usually of a brilliant yellow, but in some cases it is slightly or very deeply tinged with blood, and in such cases, when examined microscopically, blood corpuscles are to be found in it.

Even when of a brilliant yellow colour, it is liable to become coagulated very shortly after its removal from the sac, and indeed it is not uncommon to find that portions have already undergone coagulation previous to the opening of the pericardium. The parietal layer of the pericardium is usually injected and slightly opaque, but I have never recognised any true inflammatory action to be indicated.

Extending from the base of the heart along the course of the great vessels, and involving the surrounding connective tissue, there is frequently to be found considerable amount of a characteristic yellow gelatinous exudation.

Towards the base, on the outer surface of the heart and along the interventricular groove, there are distributed smaller or larger extravasations of blood. In size these may vary from a pin point up to one-eighth of an inch, but as a blending of individual points commonly occurs, the discrete areas of extravasation may measure half an inch or more in diameter. This condition is not at all characteristic or peculiar to horse-sickness, as it also occurs in cases of Texas fever and rinderpest among cattle.

The muscular substance of the heart frequently appears perfectly normal, but in some cases it is paler and somewhat cloudy.

The endocardium is most usually somewhat opaque and in the subserous tissue, especially near the attachments of the Columnæ carneæ, extravasations of blood are very commonly found.

In some rare cases ante-mortem clots are found in the cavities of the ventricles.

On examining the muscular tissue microscopically, it is usually seen that the striation of the muscular fibres is obscured owing to cloudy swelling; and among the fibres in numerous directions, near to an area of extravasation, there are to be found smaller or larger extravasations of blood, which are commonly found to be undergoing degenerative change, and may include masses of blood pigment and blood crystals.

The pleural cavity usually contains much fluid, which, like that seen in the pericardium, is either of a clear amber colour, or more or less bloodstained.

The lungs, in horses which have been stabled and not worked during their illness, appear pale in colour, or may

show patches of congestion. Close examination usually reveals the presence of a diffuse pigmentation.

The most characteristic feature, however, is an exudation of clear yellow fluid into the interlobular tissue, which dissects the lung up in every direction, but more particularly towards the free edges. At the latter situation the clear bands of exudation may measure over half an inch in diameter, and if the lung is held up between the observer and the light, the exudation bands appear transparent and of a yellow colour.

In other cases, where the animal has been ridden during its illness, the lungs may appear engorged with blood to such an extent as to simulate croupous pneumonia. On microscopic examination of the lung tissue one finds that exudation of lymph has taken place in all directions.

The endothelium of the acini is swollen, and the nuclei are frequently seen to be undergoing proliferation. Among the interstitial tissue the cells are also found to be swollen and proliferating, while smaller or larger portions of blood pigment are to be seen either among, or actually within the proliferating cells.

The veins are usually distended with blood corpuscles, and, in cases of the congested variety, enormous and innumerable areas of extravasated blood are to be found.

The spleen, as a rule, is enlarged, deeply congested, and over the whole surface may be seen small hæmorrhagic points. On section the capsule immediately retracts, and the substance is seen to be very dark in colour owing to venous engorgement.

On microscopic examination the pulp and sinuses are distended with blood corpuscles, while innumerable extravasations of blood, now more or less altered, have led to the formation of innumerable and frequently enormous masses of pigment and blood crystals, the presence of which causes sections to be cut with great difficulty.

The kidneys are usually slightly enlarged, and on section one may find in the pelvis more or less of a clear gelatinous exudation. The capsule is readily separable. In some cases the medulla appears only slightly congested, and the cortex is deeper in colour than normal.

On microscopic examination I have found evidence of irritation throughout the whole organ; the nuclei of the epithelial lining of the tubules are increased in number as are also those of the glomeruli. In various situations the swollen epithelial cells suggests an approach to true catarrhal nephritis, but this is not a general condition.

Judging from the condition which I have found in the lungs, one might expect to find venous congestion well marked in the kidney; but it is for the most part absent.

It is difficult to define intertubular serous exudation in hardened preparations, but there is evidence in the form of granular debris involving the intertubular tissue which goes to show that during life this tissue must have been the seat of an albuminous infiltration.

The gastro-intestinal tract does not usually present any appreciable abnormality, but during the epizootic of 1892 several cases which occurred in the veld were found to have varying degrees of enteritis present. As, however, the farmers of this Colony have a considerable liking for dosing sick animals with paraffin oil, sheep-dip, and other remedies, it is more than probable that the unusual symptoms could be referred to the influence of treatment. The right side of the stomach, however, is, as pointed out by Professor M'Fadyean, commonly more or less deeply congested. The cerebro-spinal system to some extent also suffers from this serous exudation, but the only symptoms which have come under my own observation have consisted in slight flattening of the convolutions of the brain and some increase in the amount of fluid found in the fifth ventricle.

The conjunctivæ are always injected, and the cornea is of a dusky hue; the buccal mucous membrane is not, as a rule, but the nasal mucous membrane is frequently injected. Infiltration of the same serous material also involves the epiglottis and the larynx; in one case the swollen condition of the vocal cords which arose from this exudation gave rise to a very great difficulty in breathing.

Pathological phenomena are, therefore, for the most part to be ascribed to the marvellous exudation of blood plasma, which, while seen more or less throughout the serous and subcutaneous tissues, is best marked within the thoracic cavity. The enormous exudation into the pericardium must exert some very definite interference with cardiac action, while the pleural exudation, combined with infiltration into the interlobular pulmonary tissue and eventually into the acini themselves, furnishes physical impediments to the function of respiration.

Throughout the course of numerous post-mortem examinations one negative feature stands out in remarkable prominence, namely, the almost total absence of any true inflammatory phenomena, while the conditions obtaining might be, for the most part, ascribed to acute venous congestion with exudation of blood plasma. This, however, cannot be considered as the primary cause of death, for, as I shall show, there is a definite toxic property associated with the contagium of this disease which seems to me to exert an action on the vaso-motor system.

Inoculation Experiments.—For the purpose of conveying to healthy animals the infection from those already sick three materials have been made use of, namely, the yellow fluid from the trachea, the fluid of the pericardium and the blood of infected animals.

The operations have been carried out in three ways:—

(*a*) By subcutaneous injection;
(*b*) By the insertion of a seton, impregnated with the infective material, under the skin;
(*c*) By drenching, *e.g.*, giving a dose by the mouth.

The sites selected for inoculation have been:

(*a*) Directly into the lung tissue, by hypodermic syringe operating through the skin over an intercostal space;
(*b*) Into the subcutaneous tissue of the neck;
(*c*) Into the subcutaneous tissue of the flank, immediately anterior to the ilium:
(*d*) Intravenously.

Previous to describing the effects produced in each case, I may detail the general symptoms which are usually produced.

Pericardial Fluid.—In two cases the injection of pericardial fluid, in doses of three cubic centimetres, failed to produce the disease; in several other cases it succeeded in initiating the malady.

Horse-sickness Blood.—The blood of virulent horse-sickness, when used by subcutaneous injection, or by seton, or by intravenous injection, has invariably been followed by the production of the disease in susceptible horses

When an injection of from one to five cubic centimetres of virulent blood is made into the subcutaneous tissue of the neck in a horse, the following train of symptoms usually appear. I may add that I possess records of more than two hundred inoculations. In a few cases where fresh blood is used which has been taken from an animal that has been dead for some hours, a slight elevation of the temperature of the inoculated horse may occur on the evening of the day of inoculation. Where, however, the blood used for inoculation has been drawn from the animal during life, and immediately thereafter used for the inoculation of a clean horse, or where the blood used has been preserved for some time

previously, it is unusual to find such an elevation occurring. Where it occurs, I am disposed to consider it due to some slight septic infection acting in the immediate site of the inoculation.

Injection of Pericardial Fluid.—Horse No. 4 was inoculated on the 9th February with 5 c.c. of pericardial fluid taken from a horse which had died during the night. The fluid was clear and of a pale straw colour. It was injected directly into the lung tissue by means of a hypodermic needle, three inches in length, which was inserted through the skin over an intercostal space, and pushed down into the lung tissue beneath.

Nothing unusual was noticed till the morning of the 15th February; temperature 101·4° at 7 a.m., and 103·4° in the afternoon. February 16th, temperature 103° F. in the early morning, and 104° later. The conjunctival mucous membranes were dusky in colour, and showed a number of injected points.

February 18th, temperature 104° F. at 7 a.m., fell to 103·4 at 10 a.m., rose to 105 F. at 1 p.m. At this time the animal was found to be breathing irregularly, and the rate was much above the normal. The temperature was now falling and the animal began to heave at the flanks, while each effort of inspiration was accompanied by the drawing of the skin over the intercostal spaces. It would lie down occasionally for a few minutes and then get up again. At 4 p.m. it lay down, stretched itself out, and giving a few spasmodic kicks, ejected a huge cloud of white foam from the mouth and nose, and died.

The post-mortem examination revealed the usual lesions; much pericardial effusion and pleural effusion, with inter-lobular infiltration of serum into the spaces between the lung tissue.

Inoculation of Preserved Blood.—Horse No. 13 was inoculated by subcutaneous injection with 5 c.c. of preserved blood. This blood was obtained from a case of horse-sickness at Pietermaritzburg, in Natal. It was preserved by mixing it with an equal volume of the following preservative, and kept for about one month before being used :—

Glycerine	1,000 c.c.
Water	1,000 c.c.
Carbolic Acid	5 grammes.

The inoculation was made on my return to the Cape Colony on the 6th of March. The site chosen was the subcutaneous tissue of the shoulder.

March 12th.—Temperature rising in the evening to 103°·4 F.

" *13th.*—Still rising.

" *14th.*—Still rising; conjunctival membranes injected.

" *15th.*—Temperature 106° F. in the afternoon. No other symptoms observable. Animal ate and drank freely.

" *16th.*—Condition unchanged. Breathing normal.

" *17th.*—Temperature falling rapidly; anima not feeding. Breathing accelerated, and towards 3 p.m. heaving at the flanks was noticed. Death occurred at 8 p.m. Froth was found in great amount round the mouth and nose.

A post-mortem examination revealed lesions commonly found; pleural and pericardial effusion; hæmorrhagic extravasations in the interior of the heart and infiltration of serum into the spaces between the substance of the lungs.

Three Classes of Examiners.

The longer I live the more convinced I become that our educational system will never be satisfactory until we undertake in a scientific manner the education and examination of examiners. A school for examiners ought to be established, and no one should be allowed to conduct an examination or set a paper who has not graduated with honours at this establishment. The idea that because a man has been through the mill himself, or has written books, or given other proofs of learning, he is therefore competent to examine his juniors is quite a fallacy, as may be seen from half the examination papers with which the rising generation is afflicted.

Examiners may be divided into three classes. There are, first, those whose object in setting a paper is to display their own knowledge or air their pet theories. As it is easy for coaches and candidates to find out what the examiner prides himself on knowing or what are his pet theories, this class of examiner only tests the skill of the coach and the "slimness" of the pupil. Secondly, there are the examiners whose primary idea is to bowl out the candidates. These are chiefly occupied in discovering what the candidate does *not* know. Properly speaking, they are not examiners but cross-examiners. Lastly, there are the examiners who seek to ascertain what the candidates really *does* know. These are the examiners who know their business and do it. Roughly speaking, examiners are about equally distributed between these three classes. It follows that only about one-third of them are really fit for their positions.—*Truth.*

Veterinary Surgeons for New Zealand.

Mr. J. H. Gilruth, Chief Veterinary Surgeon to the Government of New Zealand, has arrived in England to select fifteen veterinary surgeons, whose services will be required in the colony from April, when the New Slaughtering and Inspection Act comes into force. Mr. Gilruth is also commissioned to purchase twelve Shorthorn bulls from the best milking strains obtainable in Great Britain, while later on it is intended to purchase bulls of other approved breeds; but the colony is already well supplied with excellent Jersey and Ayrshire cattle. While Mr. Gilruth is in England he will also purchase on behalf of the Government six thoroughbred stallions of the best type suited for breeding horses for the cavalry and mounted infantry divisions of the British Army. These stallions will be placed upon farms for the use of breeders throughout the colony.

New Zealand is considered by experts to be very suitable for breeding horses of this character, and during the war in South Africa more than 200,000 remounts have been procured in the colonies and foreign countries. The New Zealand horses purchased during the present war were said by some army experts to be the best brought into South Africa, and there is no doubt that, with closer attention to this subject, the breed can be still further improved. At present buyers for the English Army often give £40 apiece for suitable horses, and New Zealand farmers would be glad to sell them thousands. Mr. Gilruth has been given a free hand in the matter, and he will not limit his choice to England, but will also visit Scotland and Ireland, while he will avail himself of the opportunity for inspecting the principal bacteriological laboratories in London and the Pasteur Institute in Paris, where he was a successful student.—*Live Stock Journal.*

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show patches of congestion. Close examination usually reveals the presence of a diffuse pigmentation.

The most characteristic feature, however, is an exudation of clear yellow fluid into the interlobular tissue, which dissects the lung up in every direction, but more particularly towards the free edges. At the latter situation the clear bands of exudation may measure over half an inch in diameter, and if the lung is held up between the observer and the light, the exudation bands appear transparent and of a yellow colour.

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Inoculation of Preserved Blood.—Horse No. 13 was inoculated by subcutaneous injection with 5 c.c. of preserved blood. This blood was obtained from a case of horse-sickness at Pietermaritzburg, in Natal. It was preserved by mixing it with an equal volume of the following preservative, and kept for about one month before being used :—

Glycerine	1,000 c.c.
Water	1,000 c.c.
Carbolic Acid	5 grammes.

The inoculation was made on my return to the Cape Colony on the 6th of March. The site chosen was the subcutaneous tissue of the shoulder.

March 12th.—Temperature rising in the evening to 103°·4 F.

" *13th.*—Still rising.

" *14th.*—Still rising; conjunctival membranes injected.

" *15th.*—Temperature 106° F. in the afternoon. No other symptoms observable. Animal ate and drank freely.

" *16th.*—Condition unchanged. Breathing normal.

" *17th.*—Temperature falling rapidly; anima not feeding. Breathing accelerated, and towards 3 p.m. heaving at the flanks was noticed. Death occurred at 8 p.m. Froth was found in great amount round the mouth and nose.

A post-mortem examination revealed lesions commonly found; pleural and pericardial effusion; hæmorrhagic extravasations in the interior of the heart and infiltration of serum into the spaces between the substance of the lungs.

Three Classes of Examiners.

The longer I live the more convinced I become that our educational system will never be satisfactory until we undertake in a scientific manner the education and examination of examiners. A school for examiners ought to be established, and no one should be allowed to conduct an examination or set a paper who has not graduated with honours at this establishment. The idea that because a man has been through the mill himself, or has written books, or given other proofs of learning, he is therefore competent to examine his juniors is quite a fallacy, as may be seen from half the examination papers with which the rising generation is afflicted.

Examiners may be divided into three classes. There are, first, those whose object in setting a paper is to display their own knowledge or air their pet theories. As it is easy for coaches and candidates to find out what the examiner prides himself on knowing or what are his pet theories, this class of examiner only tests the skill of the coach and the "slimness" of the pupil. Secondly, there are the examiners whose primary idea is to bowl out the candidates. These are chiefly occupied in discovering what the candidate does *not* know. Properly speaking, they are not examiners but cross-examiners. Lastly, there are the examiners who seek to ascertain what the candidates really *does* know. These are the examiners who know their business and do it. Roughly speaking, examiners are about equally distributed between these three classes. It follows that only about one-third of them are really fit for their positions.—*Truth.*

Veterinary Surgeons for New Zealand.

Mr. J. H. Gilruth, Chief Veterinary Surgeon to the Government of New Zealand, has arrived in England to select fifteen veterinary surgeons, whose services will be required in the colony from April, when the New Slaughtering and Inspection Act comes into force. Mr. Gilruth is also commissioned to purchase twelve Shorthorn bulls from the best milking strains obtainable in Great Britain, while later on it is intended to purchase bulls of other approved breeds; but the colony is already well supplied with excellent Jersey and Ayrshire cattle. While Mr. Gilruth is in England he will also purchase on behalf of the Government six thoroughbred stallions of the best type suited for breeding horses for the cavalry and mounted infantry divisions of the British Army. These stallions will be placed upon farms for the use of breeders throughout the colony.

New Zealand is considered by experts to be very suitable for breeding horses of this character, and during the war in South Africa more than 200,000 remounts have been procured in the colonies and foreign countries. The New Zealand horses purchased during the present war were said by some army experts to be the best brought into South Africa, and there is no doubt that, with closer attention to this subject, the breed can be still further improved. At present buyers for the English Army often give £40 apiece for suitable horses, and New Zealand farmers would be glad to sell them thousands. Mr. Gilruth has been given a free hand in the matter, and he will not limit his choice to England, but will also visit Scotland and Ireland, while he will avail himself of the opportunity for inspecting the principal bacteriological laboratories in London and the Pasteur Institute in Paris, where he was a successful student.—*Live Stock Journal.*

ARMY VETERINARY DEPARTMENT.

WAR OFFICE, PALL MALL, Jan. 8.

A.V.D.—Vet.-Lieut. T. G. Peacocke to be Vet.-Capt.

Yeomanry Cavalry, Gloucestershire (Royal Gloucestershire Hussars).—Vet.-Lieut. F. B. Jones to be Vet.-Captain.

OBITUARY.

HERBERT SEWELL, M.R.C.V.S., Army and Navy Club. Graduated, May 15, 1850, Lond.

On the 12th inst. at 40 Markham Square, Herbert Sewell, M.R.C.V.S., late veterinary surgeon in H. M. Service.—*The Times.*

CORRESPONDENCE.

CASTRATION STANDING.

Sir,

This method of operating is again interesting your readers, and several gentlemen have lately described their mode of operating more fully than in the correspondence on this subject a few years ago; one of the greatest advantages of the standing operation is the speed with which it can be completed, and having had some experience of a quick method of operating, I beg to record a few remarks on the subject.

The method by which I have operated successfully on colts of all classes may be described as follows. First of all the place for operation is chosen; I prefer a loose box if possible and always place the subject for castration with the off side against a wall, and the hind quarters against the adjoining wall; if this position is not available, the colt is placed against any wall that is handy, and I have done troublesome colts in the middle of a yard. The subject for castration is haltered and if possible a bridle put on, he is then blindfolded and the twitch applied to the nose, which one man is required to hold, another man is directed to pick up the near fore foot, throwing his weight against the colt's shoulders, a third assistant holds the knife and the Blake Emasculator, and if the colt shews a tendency to lean towards the operator he is instructed to place his hand on the hip to counteract this, or another assistant is requisitioned for the purpose. As a general rule this is all the assistance required. Grasping the off side testicle a bold incision is made from before backwards, and the testicle is let out, holding it gently with the left hand the knife is handed to the assistant and the emasculator given in exchange (the assistant should have clean hands and be previously instructed to hand the instrument the right way up), the emasculator is applied to the cord, and both hands used to close the instrument thus crushing the upper part of the cord included in the instrument and cutting through the lower part, and the testicle then falls to the ground. The instrument is exchanged for the knife and the same procedure is repeated with the left testicle.

There is some little hæmorrhage from the skin which stops in a few minutes; a mash is then given to keep the colt still for a short time, and he is kept in till next day and then turned out if the weather be propitious.

This method I consider to be the most expeditious, and I believe the most humane, the pain of crushing the cord being momentary, and except in one case, which I shall report at a later date as it was a most interesting clinical, I have never had any ill effects from hæmorrhage or any other sequel.

I have seen several other instruments of a like nature to the "Blake Emasculator" and of varying complexity, but have thought them all too heavy to be easily applied to the cord with quickness and accuracy; however, the testimonials to their worth are so many that they doubtless are most useful in other and more experienced hands than mine. The ecraseur I consider occupies more time in crushing off the testicle than the above instrument, and causes unnecessary pain to the animal, and now that so many ingenious instruments can be used with safety, surely the clam and ligature can be abandoned.

ALEXANDER A. JOHNSON, M.R.C.V.S.

Sir,

I should like to give my experience regarding the use of the wooden clam system of castration, seeing it gets so much abuse, and I will let the facts speak for themselves. Since I qualified in 1885 I have never used anything else in castrating horses of all ages and can truthfully say that I never had an accident or a death to my knowledge. The only trouble has been on perhaps half-a-dozen cases—but not more—where I have left the cord too long, and after removing the clams the cords have not receded up the inguinal canal but protruded some inches through the incisions in scrotum; these being removed by the hot iron all did exceedingly well.

I feel perfectly safe in my way, and my clients seem to prefer it to what they name "that cruel chain business, where they bleed so much." The reason I send you my experience is that anyone who has not tried the clam method, particularly young practitioners, may be misled and influenced not to try this so-called unsurgical method. It is not in the clam but in the many little things in connection with them, and also the handling and treatment of the colt after. I don't average as many as some practitioners, but a result like the one I have related on an average of 60 a season surely speaks for itself. As to being more cruel, I can only say the colts don't seem in pain but as if nothing unusual had taken place.—Yours respectfully,

SAM CHAMBERS.

Kirkheaton.

Sir,

I have no wish to commence in *The Veterinary Record* a discussion which my critic allows to drift outside of fair bounds of just argument.—Yours faithfully,

H. CAULTON REEKS, F.R.C.V.S.

Spalding, Jan. 12th.

UNQUALIFIED ASTISTANTS.

Sir,

The above subject does not come in for the consideration which it merits. The question—Should it be considered unprofessional to keep an unqualified assistant? has been answered in the affirmative by the medical profession with very satisfactory results. Young medical men have no difficulty in obtaining four or five guineas a week as assistants, which was impossible in the days of the unqualified man.

Again, it is justice to the public that they should receive the services of a qualified man when they pay for such; but how often have they been imposed on? Once more it is difficult for the beginner who works single-handed to compete with his neighbour who was able to keep an unqualified man. In the interests of the profession generally the matter should engage the attention of the Council. It is to be hoped if they undertake to to deal with it that it will prove of more interest than a topic on which to air their eloquence and illogical conclusions.—Yours truly,

W. G.

COMMUNICATIONS, BOOKS, AND PAPERS RECEIVED:—Messrs. H. C. Reeks W. Pauer, W. H. Williamson, A. A. Johnson, R. L. Green, F. Low, E. Plant, S. Chambers, W. Collinson, H. Leeney, F. E. Place. W. Packman. W. G.

Archives de Stomalogie et Journal de l'Anesthésie, No. 12; *The Midland Daily Telegraph.*